

## WSDOT Construction Courses Scheduled

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**Important Note:** The WSDOT Design courses listed below were developed as WSDOT employee training courses. Enrollment is [restricted](#) to only Local Agency personnel. These classes fill quickly as there are only 3-5 seats per class and registration is on a first come/first serve basis.

**WSDOT Staff:** WSDOT Employees please register for classes through your ATMS contact person referencing the 3 letter class code.

### Construction Class Descriptions:

[Bituminous Surface Treatment Inspection \(ACC\)](#)

[Construction Inspection Documentation \(ACY\)](#)

[Construction Materials, Approval & Acceptance \(DAP\)](#)

[Drainage Inspection \(ACF\)](#)

[Electrical-Illumination & Signals \(API\)](#)

[Excavation & Embankments Inspection \(AC3\)](#)

[Guardrail Installation for Inspectors \(DD4\)](#)

[Hot Mix Asphalt Placement \(ACB\)](#)

[Inspecting Bridge Construction \(ACM\)](#)

[Nuclear Gauge Embankment/Surfacing/Pavement Applications \(ANQ\)](#)

[Nuclear Gauge Safety & Operation \(ALG\)](#)

[PCC \(Portland Cement Concrete\) Field Testing Procedures \(ABT\)](#)

[Sampling & Testing Aggregate \(DDP\)](#)

[Sign Installation Inspection \(DFV\)](#)

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### Registration:

For a current list of scheduled classes open for registration, please go to the [LTAP Training webpage](http://www.wsdot.wa.gov/LocalPrograms/Training/WSDOTCourses.htm) (<http://www.wsdot.wa.gov/LocalPrograms/Training/WSDOTCourses.htm>)

[Consultants](#) – See Restrictions to registration

**Please do not register if you do not plan to attend. There is often a wait list for these classes.**

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### Restricted Registration:

**Eligible Attendees:** Local agencies (cities, counties, ports, tribes, transit agencies)

**Registration is not open to the following:**

- Consultants\*
- State agencies other than WSDOT
- Out-of-state agencies
- Contractors

\*Consultants can attend only if acting as official city or county engineer – they must have the local agency register on their behalf.

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## Standard Specifications Manual

The Standard Specifications is available on-line, on CD, or purchased from WSDOT Engineering Publications (\$25). Order online, or view, at the following web address <http://www.wsdot.wa.gov/publications/manuals/> or by calling (360) 705-7430.

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## Bituminous Surface Treatment Inspection (ACC)

Hours: 4

### Description

Purpose of course:

1. Provides guidance to the design and construction of chip seal applications
2. Covers design criteria for utilization of the correct application process
3. Identifies key areas of the best construction practices for chip seal projects
4. Includes information on collecting material samples
5. Covers safety procedures and proper traffic control during the project
6. Identifies required documentation
7. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

### Learning Objectives

Upon completion of the course you will be able to:

1. Identify the proper use of equipment in placing BST
2. Implement proper traffic control
3. Perform all necessary documentation
4. Identify lines of communication
5. Obtain the necessary material samples
6. Identify situations which might cause failure in the BST placement

**Target Audience** This course is for project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of a Bituminous Surface Treatment (BST) project.

### Bring the following:

Bring a current copy of the [Standard Specification Manual](#) and a calculator. A test will be given but is not required for Local Agency employees.

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## Construction Inspection Documentation (ACY)

Hours: 6

### Description

Purpose of course:

1. Provides an overview of the required documentation and forms the field inspector will need during the construction of transportation projects
2. Discusses the handling of contractor submittals

3. Provides information on proper documentation procedures
4. Discusses proper source document preparation
5. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

### **Learning Objectives**

Upon completion of the course you will be able to:

1. Identify the difference in documentation requirements between projects with Federal-Aid funding & projects funded with State dollars
2. Recognize the inspector's responsibilities to monitor wage provisions on public works projects
3. Utilize proper documentation skills to complete Inspector Daily Reports and Source Documents

**Attendees:** For all field personnel.

**Comments:** A test will be given but is optional for local agencies. Note: This course no longer covers documentation of materials. A separate course is available (ATMS code DAP) that covers documentation of materials.

### **Bring the following:**

[Standard Specification Manual](#) and a Calculator

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## **Construction Materials, Approval & Acceptance (DAP)**

Hours: 4

### **Description**

This course will focus on the approval and field acceptance process of highway construction materials by following the stewardship agreement we have with FHWA. This course will cover all of the required construction documentation, from contractor submittals to the project office, field inspector's verification of materials, material acceptance practices to material certification at project closure.

### **Learning Objectives**

Upon completion of the course you will be able to:

1. Recognize the function of the Record of Materials (ROM), Request for Approval of Materials (RAM), the Qualified Products List (QPL).
2. Identify what information is required to be on a Manufacturer Certificate of Compliance.
3. Know the importance of understanding the contract documents, before approval or acceptance of construction materials.
4. Understand what is needed to complete the Materials Certification at project completion.

### **Bring the following**

A current copy of the [Standard Specifications](#) and a calculator.

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## Drainage Inspection (ACF)

Hours: 6

### Description

1. Provides an overview of the proper drainage installation
2. Covers surveying of drainage structures
3. Identifies key areas of inspection
4. Includes information on collecting required material samples
5. Covers safety procedures during the installation, inspection and testing of a drainage structure
6. Identifies required documentation
7. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

### Learning Objectives

Upon completion of the course you will be able to:

1. Identify the different types of drainage structures
2. Recognize and use drainage staking information in the field
3. Interpret drainage plans
4. Calculate Structure Excavation Class B5
5. Check flow lines and locations of pipes
6. Identify critical lines of communication
7. Complete required documentation.

**Attendees:** For project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of drainage structures.

**Comments:** A test will be given but is optional for local agencies.

**Bring the following:** A current copy of the [Standard Specifications](#) and a calculator

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## Electrical-Illumination & Signals (API)

Hours: 12

### Description

1. Provides an overview of the construction elements of the installation of signals, illuminations and ITS systems
2. Discusses review and approval of shop drawings
3. Identifies key components of illumination, signal systems and ITS
4. Covers staking locations
5. Includes information on collecting required material samples
6. Identifies required documentation
7. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

### Objectives

Upon completion of the course you will be able to:

1. Identify illumination and signal system functions
2. Read and interpret illumination and Signal Plans

3. Check lighting and signal locations for possible interference
4. Identify critical lines of communication
5. Complete required documentation

**Attendees:** For project inspectors and field engineers who are or will be engaged in a project requiring the installation of signals, illumination and ITS components

**Comments:** A test will be given but is optional for local agencies.

**Bring the following:** A current copy of the [Standard Specifications](#), and a calculator

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## Excavation & Embankments Inspection (AC3)

### Description

1. Provides an overview of the duties of a grade inspector
2. Defines clearing and grubbing limits
3. Covers environmental issues
4. Demonstrates proper staking procedures
5. Identifies proper methods of compaction
6. Gives an overview of the moisture-density gauge used in determining compaction
7. Includes information on collecting required material samples
8. Covers safety procedures during the installation and inspection of earthwork
9. Identifies required documentation
10. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

### Learning Objectives

Upon completion of the course you will be able to:

1. Interpret grading plans
2. Recognize and use staking information in the field
3. Evaluate information documented in density reports
4. Identify proper compaction methods
5. Recognize BMP's and evaluate erosion control measures
6. Calculate payment for clearing and grubbing and earthwork
7. Interpret grading stakes for cuts, fills and line
8. Identify critical lines of communication
9. Complete required documentation.

**Attendees:** For project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of grading on a project.

**Comments:** A test will be given but is optional for local agencies.

**Bring the following:**

A current copy of the [Standard Specifications](#) and a calculator

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## Guardrail Installation for Inspectors (DD4)

Hours: 4; usually 8:00 to noon

### Course Description

This course will provide inspectors with an overview of guardrail installation. It will go over guardrail components and their correct installation as well as how to recognize potential problems and what to do to avoid them. It will also provide an overview of the required documentation and information needed in a field note.

### Learning Objectives

Upon completion of the course, you will be able to:

1. Identify the components of a good installation
2. Evaluate the proper embankment needed for guardrail
3. Calculate the placement of buried anchors
4. Identify the pay limits of different installations in the Standard Plans
5. Understand what is required for documentation
6. Prepare a field note

### Attendees

Employees new to the WSDOT construction inspection program. Transportation Tech 1 to Transportation Engineer 2, Field Inspectors who have limited or no prior WSDOT construction.

### Bring the following:

Construction Manual and [Standard Specifications](#)

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## Hot Mix Asphalt Placement (ACB)

Hours: 8

### Description

1. Provides an overview of equipment used in placing HMA
2. Identifies the duties of an inspector prior to paving
3. Covers the key areas of inspection during placement
4. Covers safety procedures for working around a paving operation
5. Identifies post production duties
6. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications and testing procedures.

### Learning Objectives

Upon completion of the course you will be able to:

1. Implement proper asphalt paving inspection techniques
2. Complete required documentation
3. Identify lines of communication
4. Demonstrate an understanding of safety requirements
5. Read paving plans.

**Attendees:** For project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of Hot Mix Asphalt (HMA) placement.

**Comments:** A test will be given but is optional for local agencies.

**Bring the following:**

A current copy of the [Standard Specifications](#) and a calculator

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## Inspecting Bridge Construction (ACM)

Hours: 24

### Description

1. Provides an overview of structural elements of bridges
2. Covers critical phases of bridge construction
3. Identifies key areas of inspection
4. Includes information on collecting required material samples
5. Covers safety procedures on a job site
6. Identifies required documentation
7. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

### Learning Objectives

Upon completion of the course you will be able to:

1. Identify the key structural elements of bridges
2. Recognize and monitor critical phases of bridge construction
3. Interpret bridge construction plans
4. Identify solutions to field problems during construction
5. Check field dimensions
6. Identify critical lines of communication
7. Evaluate sequencing events for different types of structures.

**Attendees:** For project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of work on bridge structures. This course covers construction of new bridges and retrofit of existing bridges.

**Comments:** A test will be given but is optional for local agencies.

**Bring the following:**

A current copy of the [Standard Specifications](#) and a calculator

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## Nuclear Gauge Embankment/Surfacing/Pavement Applications (ANQ)

Hours: 8

### Description

Purpose of course: Demonstrates the proper use of the nuclear gauge ; Includes information on collecting samples ; Discusses the selection of the proper density standard ; Demonstrates test methods used in determining compaction of various materials ; Identifies safety procedures to use during the inspection and testing of a embankment, surfacing and paving operations ; Covers required documentation ; Gives you a comprehensive course

manual containing information on the operation of the nuclear gauge and references to critical specifications.

### **Learning Objectives**

Objectives: Upon completion of the course you will be able to: Select and use the proper density standard ; Correct results for oversize and moisture ; Conduct proper drying procedures ; Perform density tests with acceptable accuracy ; Complete required documentation.

### **Bring the Following**

A current copy of the [Standard Specifications](#) and a calculator. A test will be given during class.

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## **Nuclear Gauge Safety & Operation (ALG)**

Hours: 7

### **Description**

Purpose of course: Discusses the fundamentals of Radiation Theory; Prepares you for the written and hands-on proficiency exams required for licensing; Discusses health and safety issues associated with operating the Nuclear Moisture Density gauge; Provides a working knowledge of the Troxler gauge; Demonstrates the operation of the gauge. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

### **Learning Objectives**

Upon completion of the course you will be able to: Take the proficiency exam; Transport the gauge safely from the office to job site; Handle emergency situations involving damage to the nuclear gauge.

### **Attendees**

This course is for personnel (WSDOT employees and Local Agency employees only) who will be operating or transporting nuclear gauges. To become a licensed operator you will be required to take both a written and a hands-on proficiency test. At the end of this class you will be given a written exam. A passing score for this exam is 70% or above. Once you have passed this test you will be eligible for your nuclear badge.

**Comments:** A test will be given.

### **Bring the following:**

A current copy of the [Standard Specifications](#) and a calculator

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## **PCC (Portland Cement Concrete) Field Testing Procedures (ABT)**

Hours: 7

### **Purpose of course:**

1. Demonstrates slump, air content, and temperature tests



2. Demonstrates fabrication, curing and transportation of cylinders
3. Identifies key aspects of equipment found in concrete plants
4. Discusses the process for random selection of a test sample
5. Covers comparing mix designs vs. batch weights
6. Identifies safety procedures to use during the testing and placement of concrete
7. Covers required documentation
8. Gives you a comprehensive course manual containing information on testing, checking the production of PCC and references to critical specifications

### **Learning Objectives**

Upon completion of the course you will be able to:

1. Perform slump, air content, and temperature tests
2. Fabricate, cure, and transport cylinders
3. Complete required documentation
4. Compare batch weights vs. mix design

### **Attendees**

For PCC testers, project inspectors and field engineers who are or will be engaged in the testing, acceptance and documentation of Portland Cement Concrete for placement on the jobsite.

### **Bring the following:**

A current copy of the [Standard Specifications](#) & a calculator. Come dressed to test concrete!

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## **Sampling & Testing Aggregate (DDP)**

Hours: 7

**Pre-Requisite:** Attendees are encouraged to review the "Aggregate Module" test procedures found in Chapter 9 of the Construction Manual (M41-01) page 9-71.

### **Course Description**

This course covers sampling and testing of aggregate and soil for approval per the WSDOT Qualified Tester Program. The course is directed to inspectors working on projects that do not involve oversight of aggregate production operations. Topics include: sampling techniques, test methods and equipment, safety procedures, and an overview of the WSDOT process for approving soil materials and aggregate.

### **Learning Objectives**

Upon completion of this course you will be able to:

1. Collect and soil and aggregate samples using appropriate procedures and safety precautions
2. Identify testing equipment
3. Explain test procedures and calibration of equipment
4. Test soil and aggregate samples and determine if they meet project requirements
5. Determine the frequency of testing required for the various soil materials and aggregates used on a project.

### **Attendees**

Inspectors working on projects that involve quality assurance testing for oversight of

aggregate production operations should take course ACA, "CN: Aggregate Production & Testing Inspection"

### **Pre Requisites**

Attendees are encouraged to review the "Aggregate Module" test procedures found in chapter 9 of the Construction Manual M41-01 (list on page 9-71)

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## **Sign Installation Inspection (DFV)**

Hours: 4

### **Course Description**

This course will provide an overview of the Standard Plans and Standard Specification requirements for installation of roadside signs. Sign structure requirements will also be covered.

### **Learning Objectives**

1. Understand the various sign post breakaway features.
2. Calculate post lengths (wood and steel)
3. Determine the appropriate locations for roadside signs
4. Review of the inspection points for sign structures

### **Course Comment**

This course is for inspectors who are or will be inspecting sign installations.

### **Bring the following:**

Please bring your construction manual and Standard Plans (Section G) and [Standard Specifications](#) .

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